PREFERENCES ABOUT CORPORATE SUSTAINABILITY ACTIONS BY BUSINESS ECONOMICS STUDENTS

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Abstract
The approach and the toolset of corporate social responsibility (CSR) may cover the initiations for achieving a higher level of sustainability. The social and technical context of the topic is complicated thanks to the various interests of the stakeholders. This paper gives additional information by analysing the personal opinions about the necessary corporate focus of CSR activities. The empirical research applies the pairwise comparison method by Guilford for exploring the preference order of business economics students in Miskolc. The results show that the respondents keep the solving of environmental problems by waste reduction and developing greener technologies are priority corporate challenges.

Introduction
Nowadays, the corporate social responsibility (CSR) boosted up the field of sustainable developmentsince it defines the fight against environmental and social problems openly as a business category [1], [2]. Of course the basic question remains whether the efforts lead to true responsibility. Tóth[3] points out that it needs changes and a new approach in business strategy, or it is only a spectacular mask for influencing the consumer behaviour.
Related to green consumer behaviour there are many researches in the fields of sociology and marketing. According to these, the basis of sustainable development is marked as changes in public values, conventions, practices and routines. Pollution can be reduced and prevented, natural resources could be utilised rationally and the acceptance of new technologies can be achieved by changes in consumption and lifestyle behaviour [4], [5].
The importance of a strong engineering approach, including the innovative solutions is not contested [6] but technological efforts are insufficient. In my opinion the achieving a sustainable economy and society strongly requires the consideration of the individual opinions and attitudes next to the common principles and goals. Professional and personal value judgements may differ from each other [7] therefore expectations and models based only on the professional aspect may be misleading. Personal opinions will be reflected in the judgmentin both private and corporate decisions. Moreover, there are distorting factors like group pressure or social expectations that changes the personal values [8]. Researchesin this field– including my results – will help the development of more reliable programmes and actions.

Materials and Methods
Data collection
The data source of the analysis is a survey prepared for higher education students that covers the personal opinions and attitudes about sustainable development and corporate social responsibility (CSR). This paper focuses on one block of the survey that lists 6 issues paired and asks to mark which one should have a higher preference in corporate thinking. The issues are as follows:

- cost reduction
- developing greener technologies

- financial support of environmental protection
- higher income for workers
- supporting schools and kindergartens
- waste reduction.

Method of preference analysis

The survey was prepared for preference analysis by the Guilford-method [9]. This method allows to calculate:

- the personal level of consistency (K) in the order of the factors (0≤K≤1, where 0 is the complete absence of consistency, 1 is the complete consistency, the latter means the responder has a clear list of preferences)
- group-level preference orders on interval-scale (a limitation of the method is that quantified results between groups are not comparable!) between 0 and 100,
- group level consensus by Kendall's coefficient of concordance for pairwise comparison (ν), including the cases K≥0,75.

The maximum level of Kendall's coefficient of concordance is 1, but the minimum is not fixed, it depends on the number of cases (*m*): ν_{even}= -1/(*m*-1) and ν_{odd} = -1/*m*. In order to ensure the comparison, I calculate with a corrected coefficient of consensus as:

$$\nu_{corr.\ i} = 100 * \frac{\nu_i - \nu_{min}}{1 - \nu_{min}} \quad (1)$$

The significance test is as follows (Kindler és Papp 1977:187):

$$u = \sqrt{2\chi^2} - \sqrt{2d_f - 1} \quad (2)$$

where γ shows the sum of values below the main diagonal in the aggregated preference matrix, i.e. the number of non-preferred incidences;*n* is the number of factors and χ^2, d_f:

$$\chi^2 = \frac{4}{m-2}\left\{\sum \gamma^2 - m\sum \gamma + \binom{m}{2}\binom{n}{2} - \frac{1}{2}\binom{n}{2}\binom{m}{2}\frac{m-3}{m-2}\right\} \quad (3)$$

$$d_f = \binom{n}{2}\frac{m(m-1)}{(m-2)^2} \quad (4)$$

Research sample and questions

The analysis is based on the data collection of 2015. The respondents are the business economics students of the University of Miskolc. I applied a random sample with 100 elements from 301 responses.The hypotheses of the analysis:

- the major part of the respondents have an inconsistent preference order,
- environmental issues are more preferred than social ones as corporate challenges,

Results

The results on the personal level of consistency is in Table 1. The hypothesis about inconsistency of preferences are to reject. 46% of the respondents show the maximum value (1,00) and 68% over 0,75. Checking the results by sub-samples the pattern of distribution is similar, there are not groups by gender, age or knowledge level designated where lower values were over-represented.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	,00	1	1,0	1,0	1,0
	,125	2	2,0	2,0	3,0
	,25	8	8,0	8,0	11,0
	,375	3	3,0	3,0	14,0
	,50	9	9,0	9,0	23,0
	,625	9	9,0	9,0	32,0
	,75	11	11,0	11,0	43,0
	,875	11	11,0	11,0	54,0
	1,00	46	46,0	46,0	100,0
	Total	100	100,0	100,0	

Table 1. Distribution of consistency level

Figure 1. shows the pairwise results. Environmental issues are regularly preferred. In case of social ones about half and half split can be seen. Cost reduction of corporations is in 'competition' with higher incomes for workers and with supporting the education.

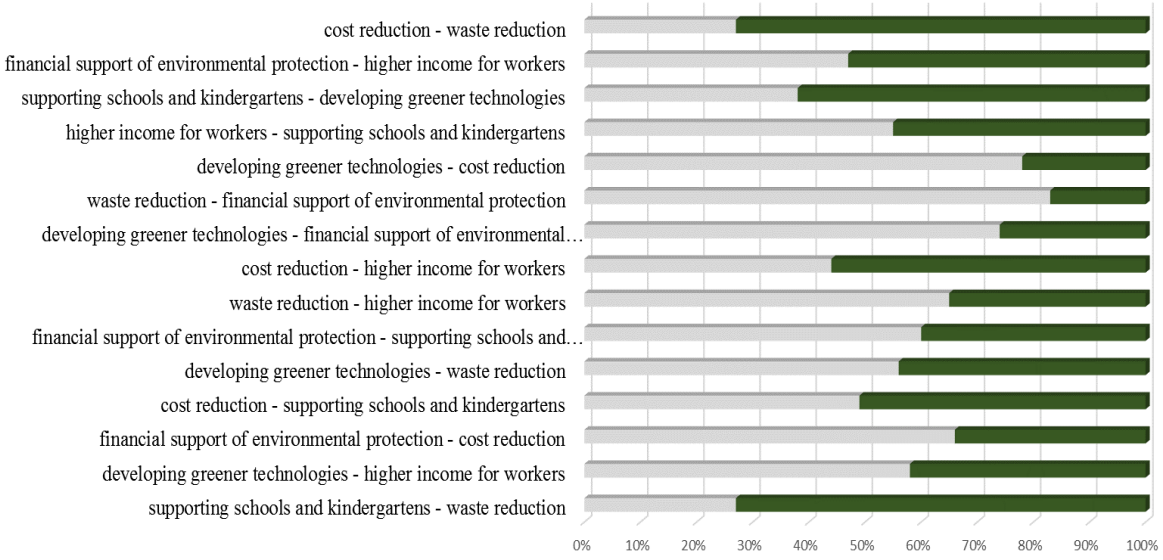

Figure 1. Pairwise comparison of the analysed factors

The results of the analysis by Guilford-method are presented in Figure 2. Importance of waste reduction and developing greener technologies as corporate challenges are prominently above than social issues. Checking the results by sub-samples I could find some differences in weights and order, but the general picture is the same. E.g. women evaluated the greener technologies the highest (100) and waste reduction the second one (90,9). The hypothesis about the higher preferences on environmental issues can be accepted.

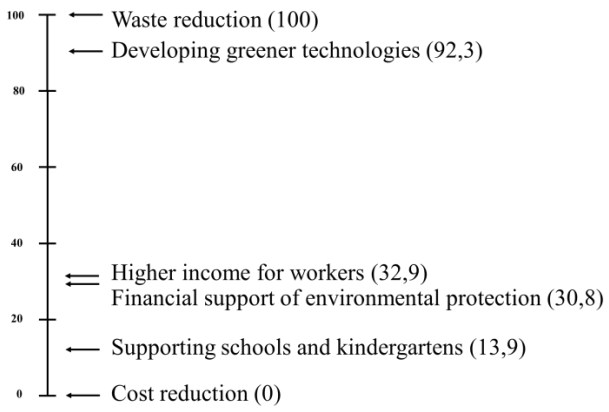

Figure 2. Results of the Guilford analysis

Conclusions

Sustainability is a complex issue: the need for harmony between environmental, social and economic issues is a clear expectation but difficult to achieve. In my research I try to explore the individual and corporate influencing factors of environmentally conscious behaviour. Pairwise comparison applied in this paper allows a nuanced picture than using a Likert-scale based attitude-analysis in exploring the preference orders. Results of the presented analysis point out, that the future management generations (business economics students) have a consistent opinion about the focus points of corporate responsibility. The respondents prefer environmental issues rather than social ones. Analysis of sub-samples by gender, age does not show fundamentally different preferences.

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